komfovent®
domekt

DOMEKT REGO 200VE(W)-B(K)

Series Air Handling Units Installation and Maintenance Service Manual

EN

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This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2002/96/EC) and your national law. This product should be handed over to a designated collection point, or to an authorised collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or your household waste disposal service.

Safety Requirements

- To avoid accidents and/or unit damage, only a trained technician must carry out the connection.
- The appropriate Personal Protective Equipment (PPE) attire is worn relative to the operation being carried out.
- Electrical equipment is rated, connected and earthed in accordance with CE regulations.

The air handling unit must be plugged in to an electrical outlet (with earth), which is in good order and corresponds with all requirements of electric safety.

Before starting any operations inside the unit, make sure that the unit is switched off, and the power cable is unplugged.

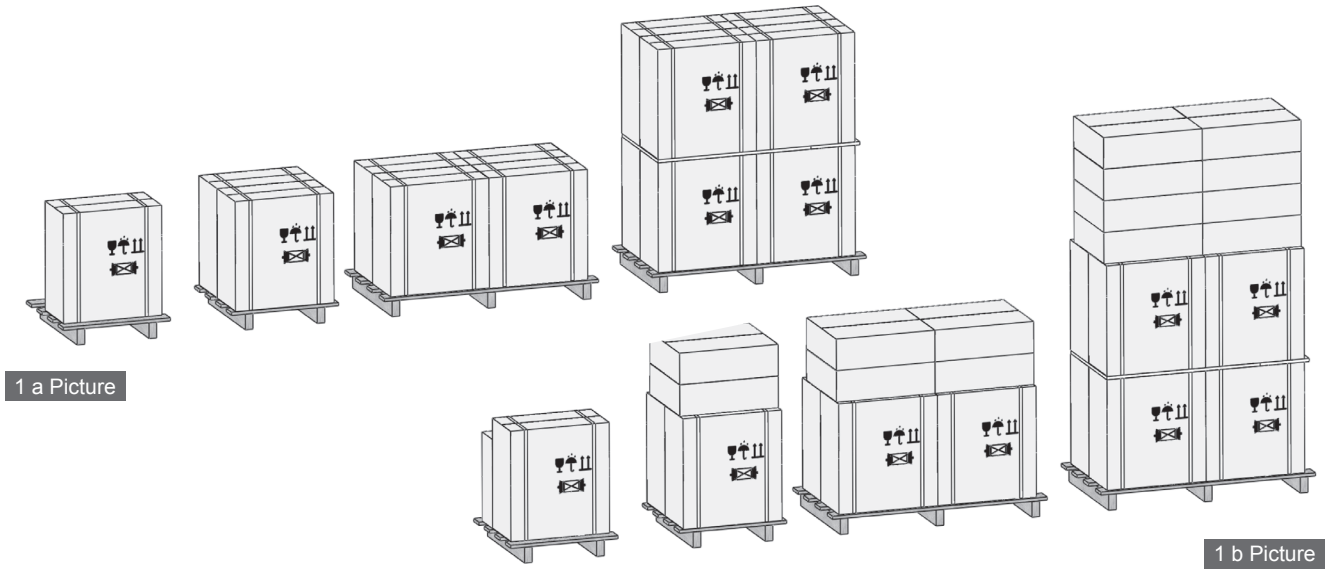
- Earth must be installed according EN61557, BS 7671
- The unit should be installed according to Installation and Maintenance Manual.
- Before starting the unit, check correct position of air filters.
- Service maintenance should be carried out only in conformity with the instructions specified herein below.
- If main cable is damaged, only manufacturer, service team or trained technician must change it in order to avoid accidents.

Transportation

The air handling units are ready for transit and storage (1 a, b Pictures). The unit is packed to prevent damage of the external and internal parts of the unit, dust and moisture penetration.

The unit is packed to box after that corners of the air handling units are protected against the damage – protective corners are used. The entire unit is wrapped up in protective film. For transit or storage, units are mounted on timber pallets. The unit is fastened to the pallet with polypropylene packing tape.

Air handling units ready for transit and storage



1 a Picture

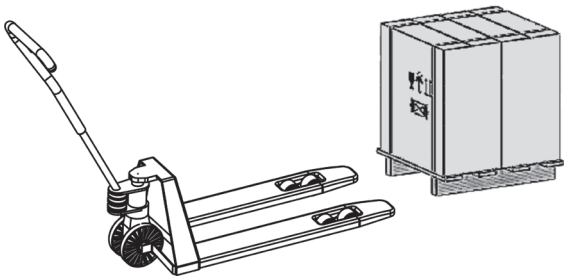
1 b Picture

1 a Units ready for transit and storage without kitchen hood

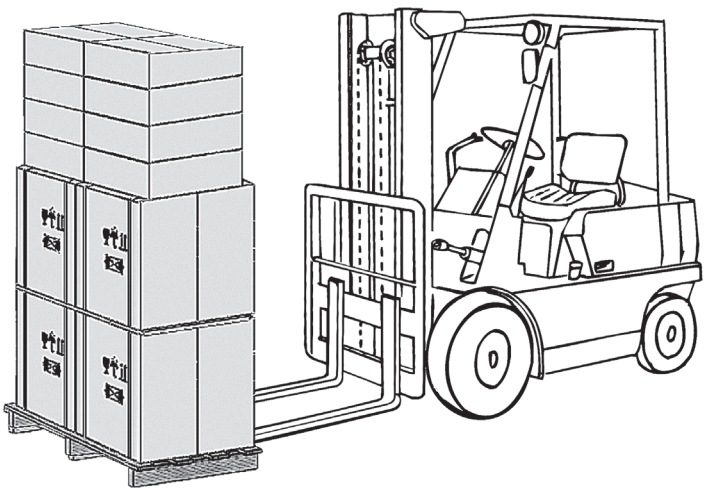
1 b Units ready for transit and storage with kitchen hood.

When unit is loaded or unloaded by crane, cargo rope is fastened in its designated places.
Forklift truck or hand pallet truck can transport air handling unit as it is shown (2 a, b Pictures).

Unit transportation by forklift truck or hand pallet truck



2 a Picture



2 b Picture

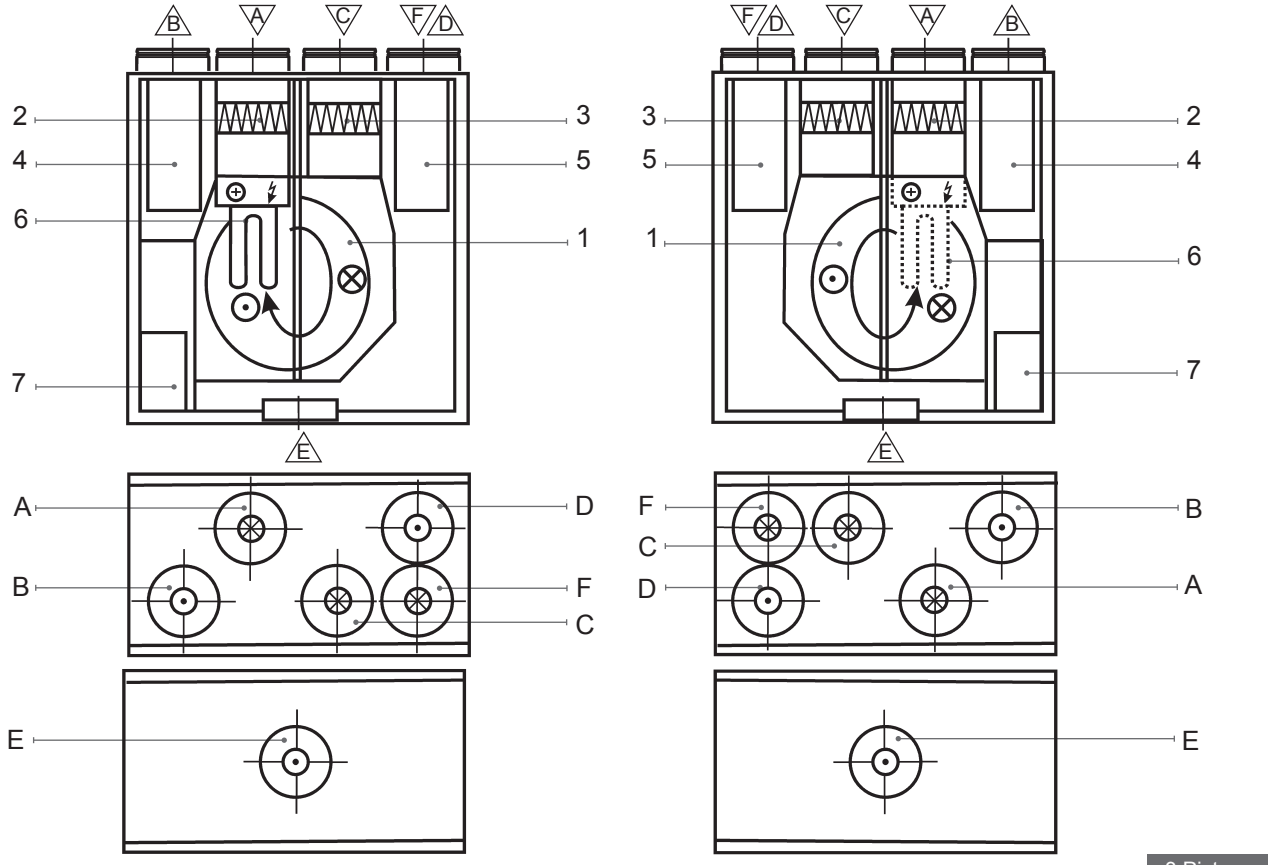
2a Unit is transported by hand pallet truck on a wooden pallet
2b Unit is transported by forklift truck on a wooden pallet

The unit should be examined upon receipt, to ensure that no visible damage has occurred during transit, and the advice note checked to ensure that all items have been received. If damage or delivery shortages are discovered, the carrier should be immediately informed. AMALVA should be notified within three days of receipt, with a written confirmation sent within seven days. AMALVA can accept no responsibility for damage by unloading from carrier or for subsequent damage on site.
If the unit is not to be installed immediately, it should be stored in a clean, dry area. If stored externally, it should be adequately protected from the weather.

Brief Description of the Unit

- Casings of air handling units are made of galvanized steel sheets, which are powder painted. Mineral wool is used for thermal insulation and sound attenuation. Unit cover panels are 15...20 mm thick. The air handling unit is intended for ventilation of small-sized spaces (eg. single family houses, flats). The unit is designed to be mounted on kitchen hood. As standard, the unit is designed for indoor placement. The operating temperature range for the unit is -30^{0}C ... 40^{0}C, outdoor air temperature.
  The air handling unit is not to be used to transport solid particles, even not in areas where there is a risk of explosive gases.
- KOMFOVENT DOMEKT REGO 200VE(W) is equipped with a rotary heat exchanger, air filters, an electric air heater, fans and automation control system, to ensure safe and efficient operation of the unit.
- Before you open the door, the unit must be switched off and the fans must have been given time to stop (up to 3 minutes).
- The unit contains heating elements that must not be touched when they are hot.
- To maintain a good indoor climate, comply with regulations and, to avoid condensation damage, the unit must never be stopped apart from during service/maintenance or in connection with an accident.
- If the unit is placed in spaces with high humidity, condensation might occur on the surface of the unit when outdoor temperatures are very low.

DOMEKT REGO 200VE(W) B(K) Air Handling Unit Schemes



3 Picture

1. Rotary heat exchanger
2. Supply air filter
3. Exhaust air filter
4. Supply fan
5. Exhaust fan
6. Electric air heater*
7. Automation control system

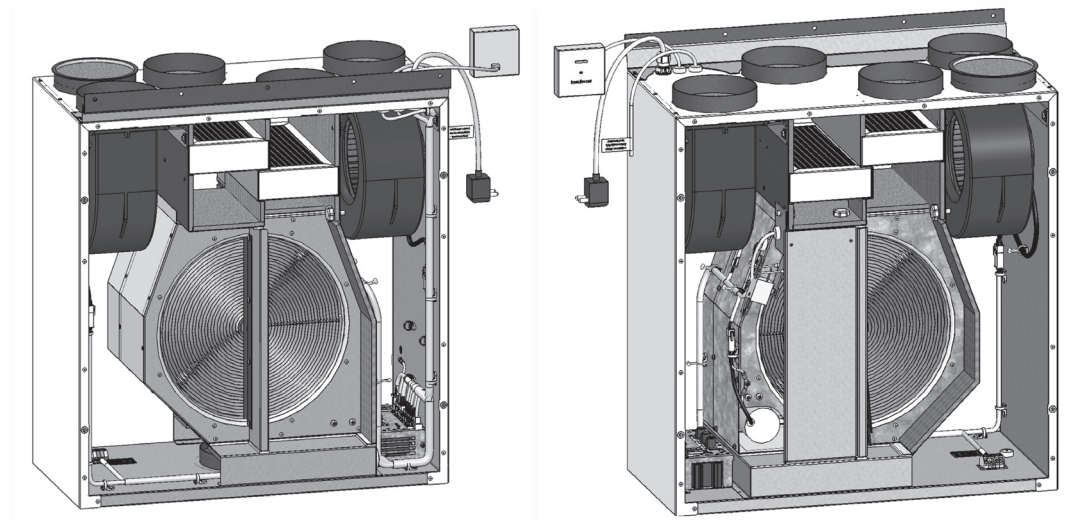
A. Outdoor intake
B. Supply air
C. Extract indoor
D. Exhaust air
E. Kitchen hood connection (by-pass – extraction without heat recovery)
F. Bathroom connection (by-pass – extraction with out heat recovery)

** AHU REGO-200VW-B is suitable for use with water duct air heater.*

Note: *The appropriate sound attenuators mounted together with supply air ducts will reduce the noise level of the fans in the premises.*

Installation

Before installing the unit, inspection must be carried out. From the front ant back, unit have removable doors.



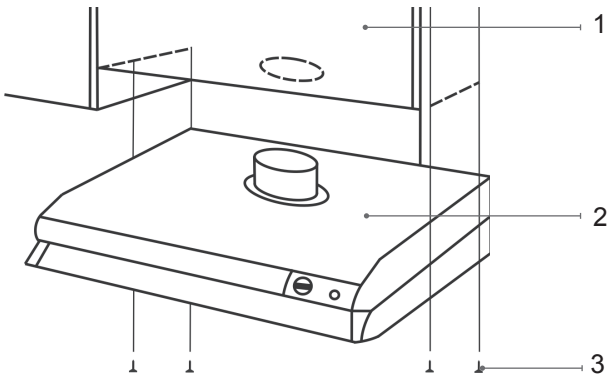
4 Picture

The components inside unit are removable from both sides. In the picture 4 are shown the units of left inspection side. To have the unit of right inspection side, it is necessary replace position of the doors due to hanging the furniture or decorative panel (see picture 6).

Inslallation of kitchen hood

Air handling unit is mounted on the kitchen hood.

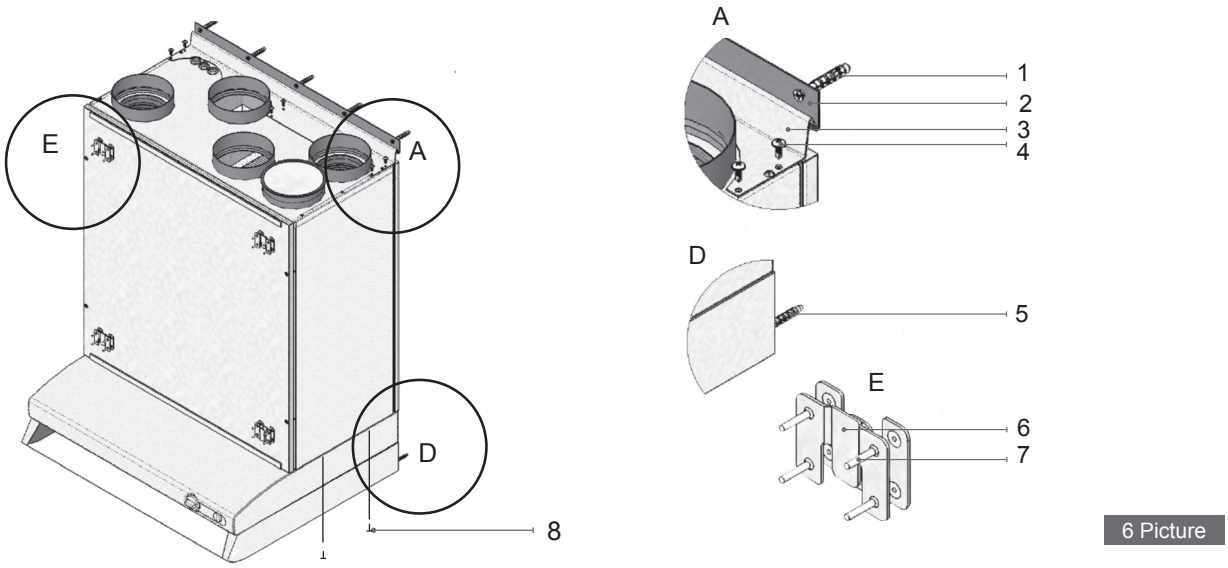
Kitchen hood



5 Picture

1. REGO 200VE(W)
2. Kitchen hood
3. Screw for hood connection (srew M4x16 base in set of unit)

Unit hanging scheme

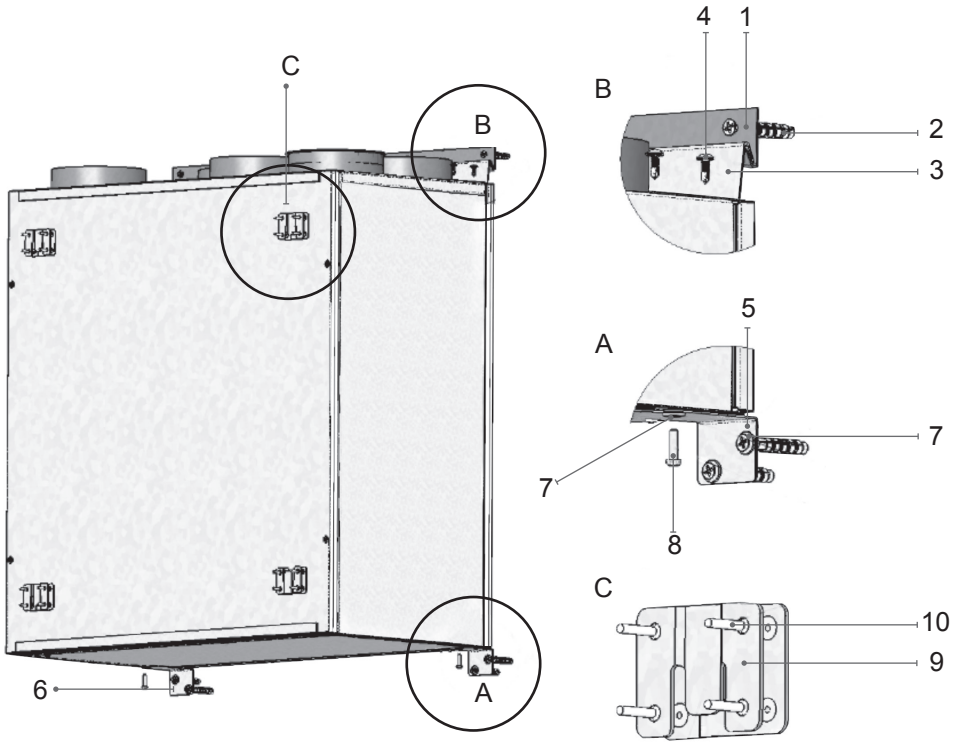


6 Picture

View E: Brackets for hanging the furniture or decorative panel.

	Marking	Description	REGO 200VE(W)-BK-AC/EC-C4-F/ pcs.
1	Wall plug KWP (nylon) 8x50 + screw 4,5x50		5
2	REGO 200VE-00.014	Mounting bracket	1
3	REGO 200VE-00.011	Unit bracket	1
4	Self tapping screw 4,2x13		16
5	Wall plug KWP (nylon) 6x35 + screw 3,5x35		2
6	Bracket for front cover 4260-2.293 Z (AGVA)		4
7	Screw 2.5x16 ZnG with cone head		16
8	Screw M4x16 for kitchen hood connection		4

Unit hanging scheme without kitchen hood

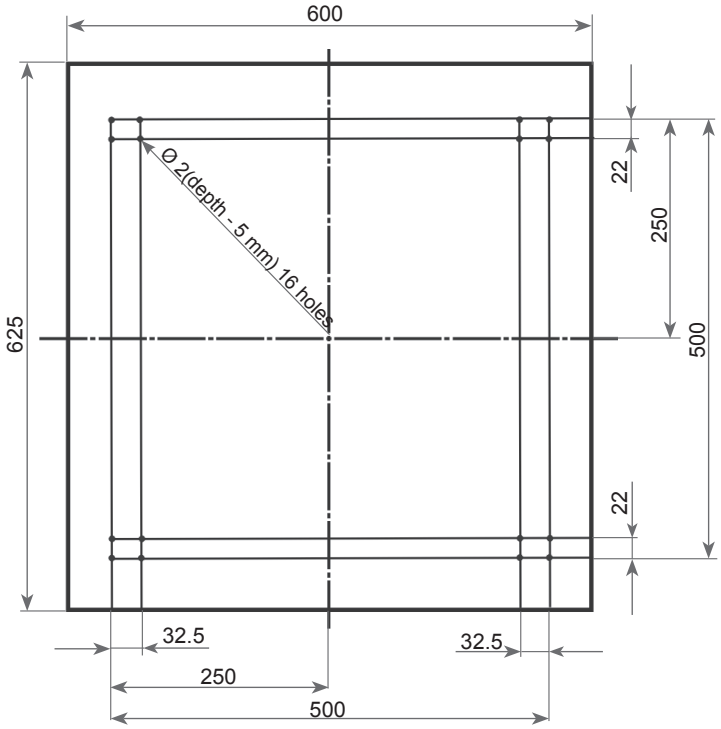


7 Picture

View C: Brackets for hanging the furniture or decorative panel.

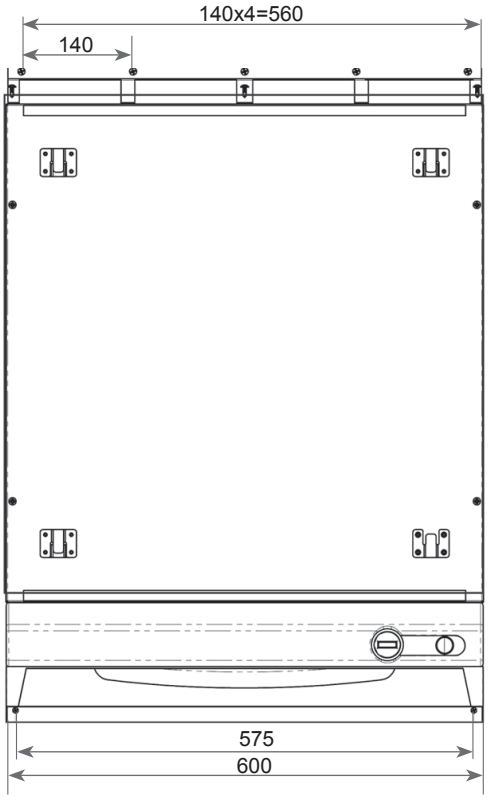
	Marking	Description	REGO 200VE(W)-B-AC/EC-C4-F/ pcs.
1	REGO 200VE-00.014	Mounting bracket	1
2	Wall plug KWP (nylon) 8x50 + screw		9
3	REGO 200VE-00.011	Unit bracket	1
4	Self tapping screw 4,2x13		16
5	REGO 200VE-00.015	Bracket	1
6	REGO 200VE-00.016	Bracket	1
7	M6 (DIN 125 A)	Washer	6
8	M 4x16 (DIN 7985)	Screw	
9	Bracket for front cover 4260-2.293 Z (AGVA)		2
10	Screw 2.5x16 ZnG with cone head		16

The dimensions of suspended furniture panel

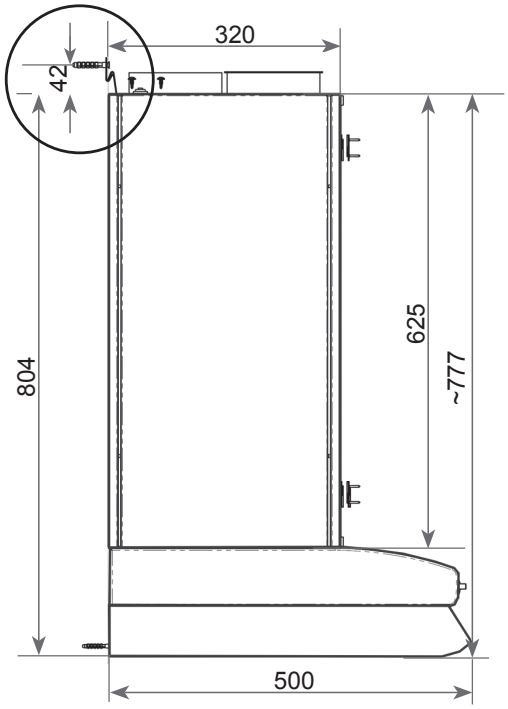


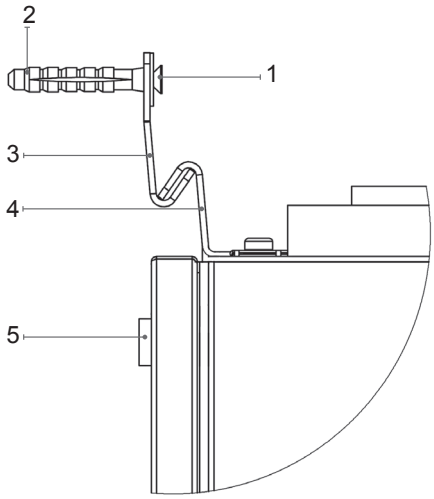
8 Picture

The dimensions of the place of the REGO 200VE(W) suspended



9 a Picture





1. Screw
2. Wall plug
3. Hanging bracket 1
4. Hanging bracket 2
5. Gasket

9 b Picture

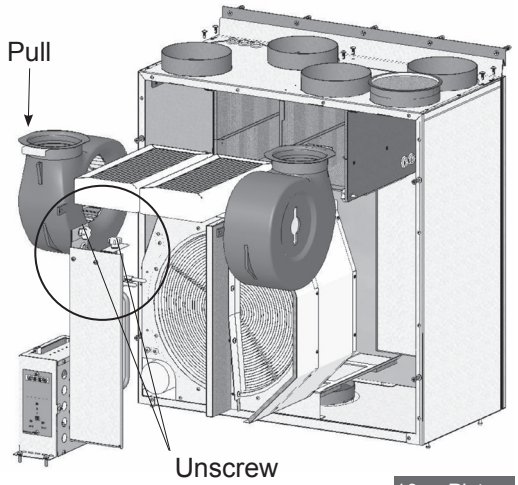
Final Inspection

After installation of the unit, a thorough inspection should be carried out. This should include inspecting the inside of the unit and removing debris and tools, which may have been left behind by on site contractors. Replace any panels, which may have been removed and close all access doors, ensuring that the door sealing gaskets have not been damaged.

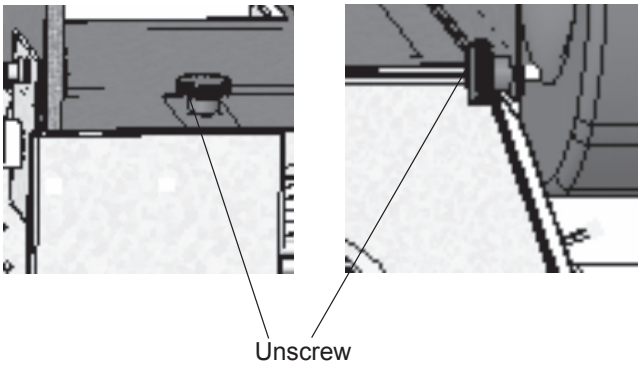
Maintenance

It is recommended to carry out routine maintenance of the air handling unit KOMFOVENT DOMEKT REGO 200VE(W) 3 – 4 times per year.

All components inside the unit are easily detachable for cleaning. Don't forget to unplug the cables out of electric components and unscrew bolts from electric heater and rotary heat exchanger.



10 a Picture



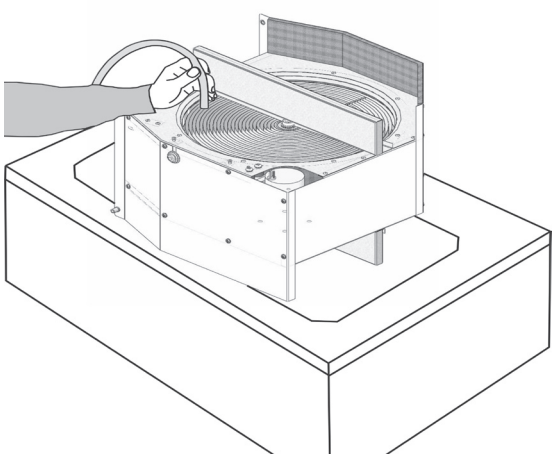
10 b Picture

We reserve the right to make changes without prior notice.

Besides preventive maintenance inspection, the following operations should be performed:

1. **Rotary Heat Exchanger Check.** Inspection of the rotary heat exchanger is performed once per year. Free rotation of the rotary heat exchanger, continuity of the rotating belt, absence of damages of the rotor drums and the seal gasket are checked. It is necessary to check the stretch of belt. Free belt will slide and the efficiency of rotary heat exchanger will fall down. To reach maximal efficiency, rotor must turn at least 8 times per minute. Polluted heat exchanger will decrease efficiency. Clean heat exchanger with an air blast or wash with tepid water. Check out water falling on the electric motor.
   Heat Exchanger Washing. If rotor cleaning by compressed air is not effective, it can be washed with soap-suds (11 Picture), or if needed – use degreasing soak for metal (aluminum) cleaning. Check out water falling on the rotor's electric motor and other automatics' elements. In case if water got into details, they must be urgently dry up. Leave rotor to dry in a warm place. Rotor can be connected only when it is absolutely dry.

Heat Exchanger Washing



11 Picture

2. **Fans Check** (once per year)**.** Polluted fans decrease efficiency.

   ⚠ Before performing any inspection work, check whether the unit is switched off from the electric power supply.

   Fans should be carefully cleaned with textile or soft brush. Do not use water. Do not break balance. Check if direction of fan turns is right, because wrong direction of turns gives only 30% of rating. Check if fan freely rotates and is not mechanically damaged, if impeller does not touch suction nozzles, fan does not spread noise, the pressure tubes are connected to the nozzle (if required), mounting bolts are screwed.

3. **Air heater check.** Recommended to perform periodical inspection and cleaning of heater. Check the plates of water air heater. The air heater is cleaned with hoover from supply air side or with air blast from exhaust air side. If it is very dirty, wash with tepid water, which will not make corrosion of aluminium. Check if position of return water temperature sensor is right. Check if electric air heater is properly fixed, wires connections are not damaged and heating elements are not bent. They can be damaged or bent due to uneven heat or uneven and turbulent air direction. Check if electric air heater is clear of unnecessary things and heating elements are not clogged, because this can cause unpleasant smell or in the worst case – dust can start burning. Air flow through the air heater should be greater than 1,5 m/s. Heating elements can be cleaned with hoover or wet textile.

4. **Air Filter Clogging Check.** Change air filters when air filter clogging is indicated. We recommend to change filters at least twice per year: before and after heating season, or more*. If air handling unit is working in small speed, the filters must be checked on unit maximum speed. Filters are one time used. We do not recommend cleaning them. Stop the air handling unit before changing filters.

** Clogged filters unbalance ventilation system, air handling unit uses more power.*

Technical Information

Specifications

REGO 200VE(W)	Dimensions	AC VE/VW	EC VE/VW
Nominal air flow	m^3/h	200	300
Unit weight	kg	40	42
Capacity	kW	1,0 / 1,2	1,0 / 1,2
Input power	W	2x137	2x70
Supply voltage	V / Hz	~230 / 50 /1 phase	~230 / 50 /1 phase
Maximal operating current	A	5,75 / 1,41	5,1 / 0,76
Ductwork connection	mm	125	125
Thermal efficiency of rotary heat exchanger up to	%	80	80
Energy recovery of rotary heat exchanger up to	kW	2,27	2,27

Filters

	Supply air	Exhaust air	Dimensions
Filter class	F7	F7	
Type	Panel	Panel	
Dimensions bxhxl	285x130x46	285x130x46	mm

Acoustic data of REGO 200VE(W)-B-AC

		63	125	250	500	1000	2000	4000	8000	dB(A)
Supply air flow (into air ducts)	Intake	55	52	50	50	50	47	43	38	**54,1**
	Supply	60	62	63	61	60	58	54	50	**65,0***
Exhaust air flow (into air ducts)	Extract	55	52	50	50	50	48	43	38	**54,3**
	Exhaust	60	62	63	61	60	58	54	50	**65,0**
Kitchen hood connection		58	57	55	55	56	54	51	47	**60,5**
Bathroom connection		59	59	59	58	58	56	52	48	**62,7**
Surrounding (3 m distance)		52	53	51	44	37	32	27	23	**46,5**

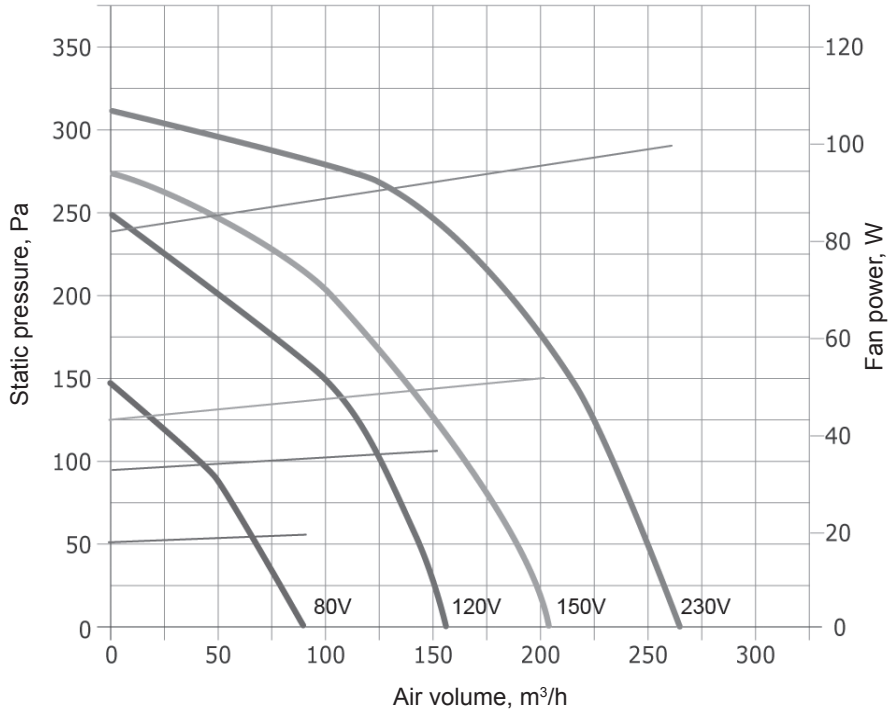
** For AHU REGO 200VW-B, sound power less up to 2 dB(A).*

Acoustic data of REGO 200VE(W)-B-EC

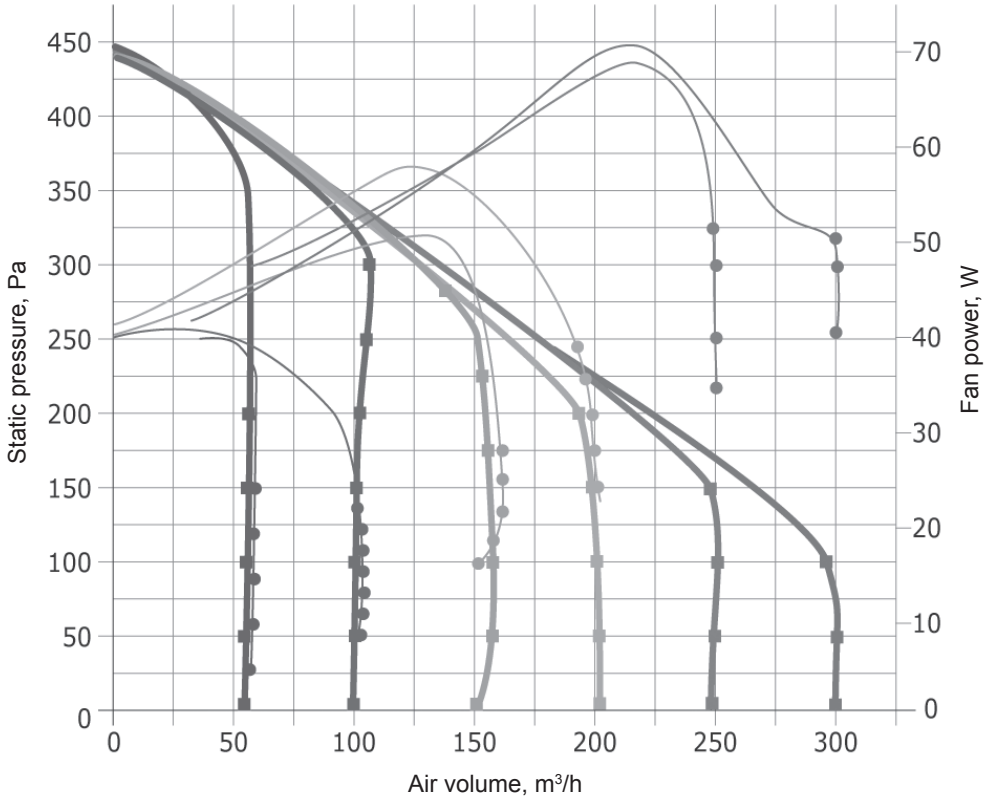
		63	125	250	500	1000	2000	4000	8000	dB(A)
Supply air flow (into air ducts)	Intake	49	47	43	43	45	41	38	36	**48,8**
	Supply	55	56	54	54	54	52	50	48	**59,0***
Exhaust air flow (into air ducts)	Extract	49	47	43	43	45	41	38	36	**48,8**
	Exhaust	55	56	54	54	54	52	50	48	**59,0**
Kitchen hood connection		52	50	44	45	48	46	45	44	**53,4**
Bathroom connection		53	51	47	48	50	49	47	45	**55,2**
Surrounding (3 m distance)		47	47	44	38	32	29	25	22	**40,3**

** For AHU REGO 200VW-B, sound power less up to 1,5 dB(A).*

REGO 200VE(W*)-B-AC Performance

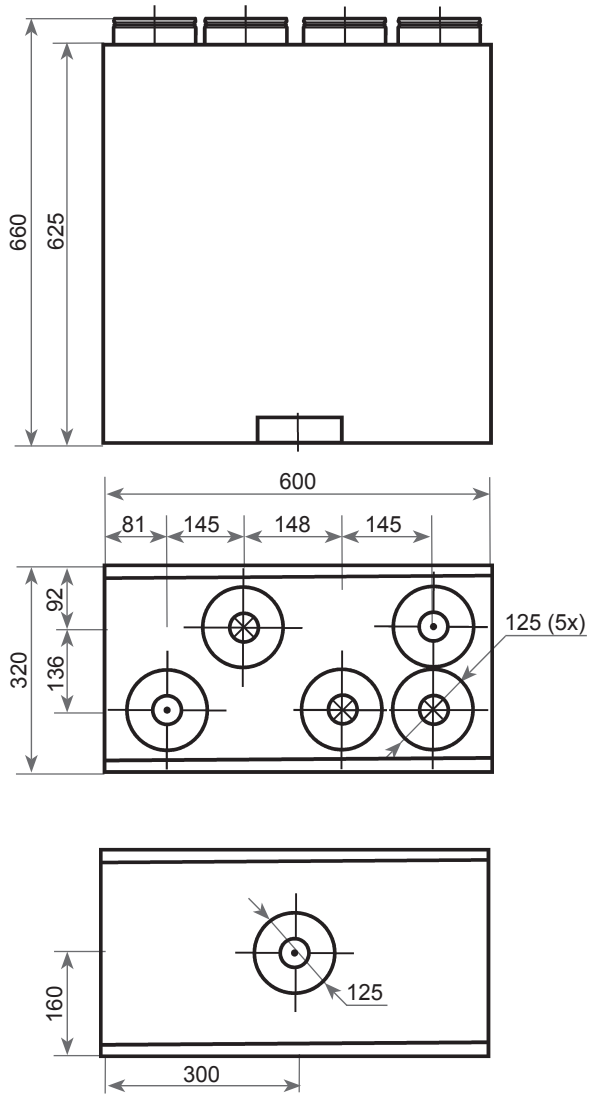


REGO 200VE(W*)-B-EC Performance



** Correction factor for REGO 200VW - 25Pa*

Scheme



Note: *Maintenance service is available from both sides of the unit.*

Ordering Key

REGO – 200 – V E (W) – B K – AC – C4 – F

- Filter class (F5 or F7)
- Controller type (C4)
- Motor type: AC - alternating current
  EC - electronically commutated
- Kitchen hood
- By pass
- Air heater: W-water, E-electric
- Version: vertical
- Size (shows nominal air flow)
- AHU type:
  REGO – with rotary heat exchanger

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